

**US Department of Energy
National Laboratory System
Science and Technology Information**

The following shows the equivalent "R" values of the most common types of insulation. When insulation collects moisture or any air is allowed to pass through it, the "R" value goes to zero.

**Fiberglass insulation.....R 3.2 per inch
32% Efficiency Rating
3 ½ inches in a 2X4 wall with a 32% ER is equivalent to R11.2
Collects moisture**

**Cellulose insulation.....R 3.5 per inch
36% Efficiency Rating
3 ½ inches in a 2X4 wall with a 34% ER is equivalent to R 12.74
Collects moisture**

**Open cell foam insulation.....R 3.5 per inch
44% Efficiency Rating
3 ½ inches in a 2X4 wall with a 44% ER is equivalent to R 13.72
Collects moisture**

**Closed cell foam insulation.....R 7 per inch
92% Efficiency Rating
3½ inches in a 2X4 wall with a 92% ER is equivalent to R 63.7
2 inches in a 2X4 wall with a 92% ER is equivalent to R 40.18
1 inch in a 2X4 wall with a 92% ER is equivalent to R 20.09
Does not collect moisture**